

Supplementary figures and video legends

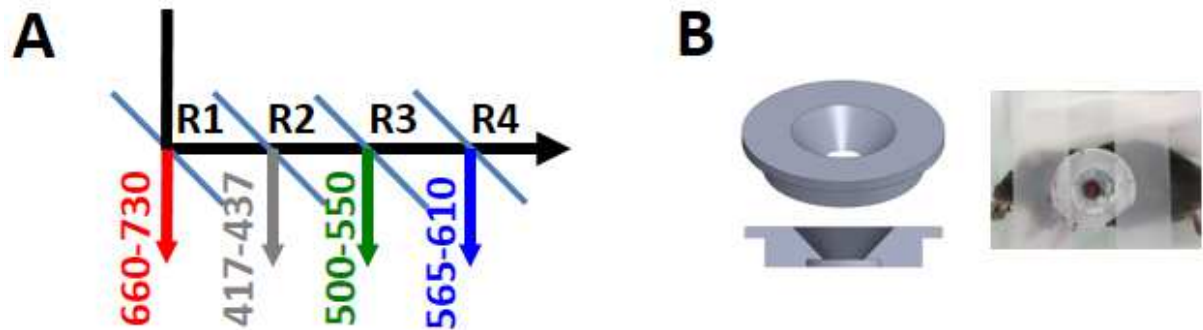


FIG S1

(A) Configuration of NDD filters allowing detection of SHG (R2), GFP (R3), Rhodamine B or Alexa Fluor 568 (R4) and Alexa Fluor 633 (R2). (B) Design of the window system holding a 12 mm diameter glass coverslip (left) and positioning on a ventilated mouse (right).

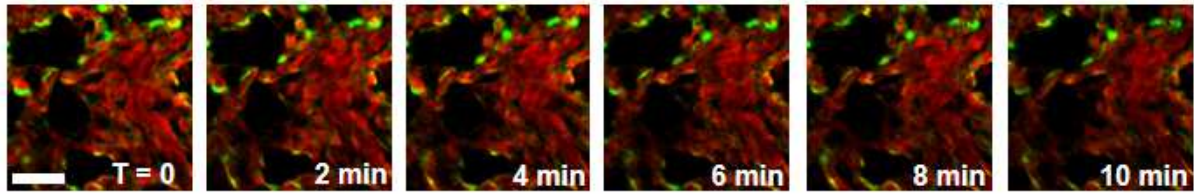


FIG S2

In vivo TPEF time-lapse of a Flk1^{gfp} mouse lung after i.v. administration of rhodamine B-dextran following 2 hours of ventilation. Green: Flk1 endothelial cells (GFP). Red: rhodamine B-dextran. Scale bar: 10 μ m.

16 **Video S3**

17 In vivo TPEF time-lapse of a naïve CX3CR1 mouse. Green: CX3CR1 cells (GFP). Grey:
18 fibrillar collagen (SHG). Scale bar: 10 µm.

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20 **Video S4**

21 In vivo TPEF time-lapse of a Flk1^{gfp} mouse lung after i.v. administration of rhodamine B
22 dextran following 2 hours of ventilation. Green: Flk1 endothelial cells (GFP). Red: rhodamine
23 B dextran.

24

25 **Video S5**

26 In vivo TPEF time-lapse of a CX3CR1 cell and *B. anthracis* spores interaction during 32
27 minutes. Scale bar: 10 µm. Green: CX3CR1 cells (GFP). Red: *Bacillus anthracis* spores (Alexa
28 Fluor 568). Grey: fibrillar collagen (SHG).

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30 **Video S6**

31 In vivo TPEF time-lapse of a CX3CR1 cell and *B. anthracis* spore interaction (upper right
32 quarter) during 30 minutes. Scale bar: 10 µm. Green: CX3CR1 cells (GFP). Red: *Bacillus*
33 *anthracis* spores (Alexa Fluor 568). Grey: fibrillar collagen (SHG).

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37 **Video S7**

38 In situ TPEF z-projected time-lapse of contact between a CX3CR1 cell and a macrophage from
39 5 to 6 hours after infection by non-stained spores. Green: CX3CR1 cells (GFP). Blue:
40 Macrophages (Rhodamine B-dextran). Grey: fibrillar collagen (SHG). Scale bar: 10 μ m.

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42 **Video S8**

43 In situ TPEF z-projected time-lapse of contact between CX3CR1 cells and a macrophage from
44 5 to 6 hours after infection by non-stained spores. Green: CX3CR1 cells (GFP). Blue:
45 Macrophages (Rhodamine B-dextran). Grey: fibrillar collagen (SHG). Scale bar: 10 μ m.

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47 **Video S9**

48 In situ confocal z-projected time-lapse of infected macrophages and CX3CR1 cells. Time in
49 minutes. Green: CX3CR1 cells (GFP). Blue: Macrophages (Rhodamine B-dextran). Red:
50 *Bacillus anthracis* spores (Alexa Fluor 633). Scale bar: 10 μ m.

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52 **Video S10**

53 In vivo time-lapse of macrophage-CX3CR1 cell interaction 5 hours after infection by non-
54 stained spores. Green: CX3CR1 cells (GFP). Blue: Macrophages (Rhodamine B-dextran).
55 Grey: fibrillar collagen (SHG). Scale bar: 10 μ m.

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